

## STRUCTURAL ELUCIDATION OF A CAPSULAR POLYSACCHARIDE FROM *LACTIPLANTIBACILLUS PLANTARUM*

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In recent times, nutrition has become one of the main health patterns due to disorders related to sedentary lifestyles, and therefore, consumers consider functional foods an attractive solution [1]. Among the main ingredients of functional foods are probiotics, that are live microbes that have beneficial effects on the host [2]. Among probiotics, lactic acid bacteria (LAB) have several scientifically proven effects on human health, such as antimicrobial activity, immune enhancement, and anti-cancer activity. Their activities derive from the molecules they produce, including polysaccharides, which are used not only as ingredients but also especially as food additives. The wide spectrum of applications of microbial polysaccharides is due both to their properties as thickeners and, above all, to their immunomodulatory properties, i.e., anti-cancer, anti-inflammatory or antimicrobial [3].

Based on the above, the present work focuses on the study of cell wall polysaccharides produced by a strain of *Lactiplantibacillus plantarum*, a Gram-positive, mesophilic bacterium belonging to the LAB group, which colonises the human and animal gastrointestinal tract. *L. plantarum* can produce antimicrobial and antioxidant molecules, modulate the immune system, and strengthen the intestinal microflora [4]. However, the identity of the glycans produced by this bacterium is unknown, even though they are supposed to be key players in the activities reported. This communication will describe the structural characterisation of the capsular polysaccharide produced by *L. plantarum*, paving the way for studies aimed at determining its beneficial functions.

### References:

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